Changes to legislation: *Commission Regulation (EU) No 630/2012 is up to date with all changes known to be in force on or before 28 December 2020. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes*

Commission Regulation (EU) No 630/2012 of 12 July 2012 amending Regulation (EC) No 692/2008, as regards type-approval requirements for motor vehicles fuelled by hydrogen and mixtures of hydrogen and natural gas with respect to emissions, and the inclusion of specific information regarding vehicles fitted with an electric power train in the information document for the purpose of EC type-approval (Text with EEA relevance)

COMMISSION REGULATION (EU) No 630/2012

of 12 July 2012

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information[(1)], and in particular article 5(3)(a)(f) and (i) thereof,

Whereas:

(1) The Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee – A European strategy on clean and energy efficient vehicles[(2)], recognizes the existence of a wide range of technologies (electricity, hydrogen, biogas, and liquid biofuels) that are likely to contribute significantly to the Europe 2020 priorities of developing an economy based on knowledge and innovation (smart growth) and promoting a more resource efficient, greener an more competitive economy (sustainable growth).

(2) The internal combustion engine (ICE) is likely to remain dominant in road vehicles in the short and medium term perspective; therefore, a smooth transition from ICE to other kinds of power-trains based on electricity (electric battery, fuel cell) could be facilitated by adapting ICE to clean fuels, such as hydrogen (H2) or mixtures of hydrogen and natural gas (H2NG).

(3) Given the uncertainty surrounding the future of power-train technology and the likelihood that new technologies will represent an increasingly large share of the market, it is necessary to adapt current European type-approval legislation to those technologies.

(4) Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council

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on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information[3] does not currently include H2 and H2NG among the type of fuels considered. Therefore, it is appropriate to extend the type-approval procedure established in that Regulation to cover those fuels.

(5) Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC[4] established safety requirements for the type-approval of motor vehicles with regard to hydrogen propulsion. Environmental protection must also be achieved as nitrogen oxide emissions from hydrogen used as a fuel in ICEs may have an impact on the environment.

(6) H2NG mixtures release into the atmosphere a certain amount of pollutants, mainly hydrocarbons, carbon monoxides, nitrogen oxides and particulate matters; these emissions have to be addressed.

(7) The different formulae and parameters used for the determination of the results of the emission tests should be adapted for the specific cases of H2 and H2NG used in ICEs, as those formulae and parameters are strongly dependent on the type and characteristics of the fuel used.

(8) The documents provided by the manufacturer to the national approval authorities should be updated in order to incorporate the relevant information concerning H2, H2NG and electric vehicles.

(9) Regulation (EC) No 692/2008 should therefore be amended accordingly.

(10) The measures provided for in this Regulation are in accordance with the opinion of the Technical Committee – Motor Vehicles,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EC) No 692/2008 is hereby amended as follows:

1. Article 2 is amended as follows:

(a) Point 16 is replaced by the following:

16. 'hybrid electric vehicle' (HEV) means a vehicle, including vehicles which draw energy from a consumable fuel only for the purpose of re-charging the electrical energy/power storage device, that, for the purpose of mechanical propulsion, draws energy from both of the following on-vehicle sources of stored energy/power:

(a) a consumable fuel;

(b) a battery, capacitor, flywheel/generator or other electrical energy/power storage device;

(b) The following points are added:

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33. 'Electric power train' means a system consisting of one or more electric energy storage devices, one or more electric power conditioning devices and one or more electric machines that convert stored electric energy to mechanical energy delivered at the wheels for propulsion of the vehicle;

34. 'Pure electric vehicle' means a vehicle powered by an electric power train only;

35. 'flex fuel H2NG vehicle' means a flex fuel vehicle that can run on different mixtures of hydrogen and NG/biomethane;

36. 'Hydrogen fuel cell vehicle' means a vehicle powered by a fuel cell that converts chemical energy from hydrogen into electric energy, for propulsion of the vehicle.

2. The annexes are amended in accordance with the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 12 July 2012.

For the Commission

The President

José Manuel BARROSO

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ANNEX

The Annexes to Regulation (EC) No 692/2008 are amended as follows:

1. Annex I is amended as follows

(a) Point 1.1 is replaced by the following:

1.1. Additional requirements for mono fuel gas vehicles, bi-fuel gas vehicles and flex fuel H2NG vehicles.

(b) Point 1.1.1.1 is replaced by the following:

1.1.1.1. A family means a group of vehicle types fuelled by LPG, NG/biomethane, H2NG, identified by a parent vehicle.;

(c) Point 1.1.2 is replaced by the following:

1.1.2. In case of vehicles fuelled by LPG, NG/biomethane, H2NG, EC type-approval is granted subject to the following requirements:;

(d) In point 1.1.2.1. the following paragraph is added:

In the case of a flex fuel H2NG vehicle, the composition range may vary from 0 % hydrogen to a maximum percentage of hydrogen within the mixture, which shall be specified by the manufacturer. The parent vehicle shall demonstrate its capability to adapt to any percentage, within the range specified by the manufacturer. It shall also demonstrate its capability to adapt to any NG/biomethane composition that may occur across the market, regardless of the percentage of hydrogen in the mixture.;

(e) Points 1.1.2.2, 1.1.2.3 and 1.1.2.4 are replaced by the following:

1.1.2.2. In the case of vehicles fuelled by LPG, NG/biomethane, the parent vehicle shall be tested in the type 1 test on the two extreme gas reference fuels set out in Annex IX. In the case of NG/biomethane, if the transition from one gas fuel to the other gas fuel is, in practice, aided through the use of a switch, this switch shall not be used during type-approval.

In the case of flex fuel H2NG vehicles, the parent vehicle shall be tested in the type 1 test with the following fuel compositions:

— 100 % H-gas.
— 100 % L-gas.
— The mixture of H-gas and the maximum percentage of hydrogen specified by the manufacturer.
— The mixture of L-gas and the maximum percentage of hydrogen specified by the manufacturer.

1.1.2.3. The vehicle is considered to conform if, under the tests and reference fuels mentioned in point 1.1.2.2, the vehicle complies with the emission limits.

1.1.2.4. In the case of vehicles fuelled by LPG or NG/biomethane, the ratio of emission results “r” shall be determined for each pollutant as follows:

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Type of fuel	**Reference fuels**	**Calculation of "r"**
LPG	fuel A	$r = \frac{B}{A}$
	fuel B	
NG/Biomethane	fuel G20	$r = \frac{G25}{G20}$
	fuel G25	

(f) The following point 1.1.2.5 is inserted:

1.1.2.5. In the case of flex fuel H2NG vehicles, two ratios of emission results "r_1" and "r_2", shall be determined for each pollutant as follows:

Type of fuel	**Reference fuels**	**Calculation of "r"**
NG/biomethane	fuel G20	$r_1 = \frac{G25}{G20}$
	fuel G25	
H2NG	Mixture of hydrogen and G20 with the maximum percentage of hydrogen specified by the manufacturer	$r_2 = \frac{H2G25}{H2G20}$
	Mixture of hydrogen and G25 with the maximum percentage of hydrogen specified by the manufacturer	

(g) In point 1.1.3, the first paragraph is replaced by the following:

For the type-approval of a mono- fuel gas vehicle and bi-fuel gas vehicles operating in gas mode, fuelled by LPG or NG/biomethane, as a member of the family, a type 1 test shall be performed with one gas reference fuel. This reference fuel may be either of the gas reference fuels. The vehicle is considered to comply if the following requirements are met:;

(h) The following point 1.1.4 is inserted:

1.1.4. For the type-approval of a flex fuel H2NG vehicle as a member of a family, two type 1 tests shall be performed, the first test with 100 % of either G20 or G25, and the second test with the mixture of hydrogen and the same NG/biomethane fuel used during the first test, with the maximum hydrogen percentage specified by the manufacturer.

The vehicle tested in accordance with the first paragraph shall be considered as complying if, in addition to requirements set out in points (a), (e) and (g) of point 1.1.3., the following requirements are met: